Cosmic game

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1

The Hurricane.

On January 21, 2205, at 10:50 Universal Time, the spacecraft Hurricane tears away from the Hilda spaceport, a vast platform of steel and glass nestled in an arid plain under a pearl-gray sky. The slender control towers pierce the mist, their beacons twinkling like fireflies in the icy dawn. A low rumble from the advanced ion propulsion engines shakes the ground, blurring the silhouettes of technicians amid swirls of vapor from the cooling conduits.

With sovereign elegance, the spacecraft ascends. Its 80-meter conical fuselage, forged from titanium alloys and composites, gleams under the spotlights. A trail of bluish plasma slashes through the atmosphere, and within minutes, Earth fades into a mere indigo curve in the ship's wake. The Hurricane streaks into the abyss of space, carrying a crew ready to defy the vastness.

A masterpiece of engineering, the Hurricane is designed for manned interstellar travel. Its modular structure of independent, sealed compartments

minimizes damage in case of perforation or failure. Its retractable wings, sleek and blade-like, enable atmospheric takeoffs and landings before folding back to face the void. An innovative system of miniaturized gravitational fields sucks in cosmic dust at the bow, creating an artificial vacuum that neutralizes particles—those invisible grains that become deadly projectiles at superluminal speeds.

Paired with a compact nuclear reactor, the ion propulsion system breaks the light barrier, propelling the ship to unimaginable velocities. A magnetic shield, a pulsing halo around the hull, repels meteorites and debris, while multilayer Whipple shields absorb impacts from micrometeorites and cometary dust encountered in the asteroid belt, the centaur region, or the Kuiper Belt.

For navigation, the Hurricane is a predator of space, bristling with high-gain parabolic antennas and multispectral sensors (infrared, ultraviolet). Long-range radars and LIDAR map asteroids, chaotically orbiting centaurs, and trans-Neptunian objects in real time, avoiding collisions in poorly charted zones. Spectrometers probe the composition of nearby celestial bodies, and an aerogel collector

captures interstellar dust, enriching the scientific mission.

Built for autonomy, the Hurricane sustains its seven-member crew, housed in a pressurized central module. A closed-loop ecosystem recycles 95% of water and oxygen, filtering waste through advanced bioreactors. Compact hydroponic greenhouses, bathed in artificial light, produce vegetables and algae, supplementing freeze-dried food reserves for a decades-long journey.

An autonomous infirmary, equipped with surgical robots and AI diagnostics, treats injuries and illnesses, as no Earthly rescue is possible. To combat isolation, modular living spaces incorporate virtual reality, circadian lighting mimicking Earth's glow, and digital libraries, bolstering morale against the interstellar abyss.

Crew protection is paramount. Polyethylene panels rich in hydrogen, integrated into the hull, block galactic cosmic rays, especially intense beyond the heliosphere, while an active magnetic shielding system reduces exposure to planetary magnetospheres, like Jupiter's. Radioisotope thermoelectric generators (RTGs) back up the nuclear

reactor, ensuring constant power for vital systems. Every component, tested to withstand vacuum, impacts, and radiation, embodies redundancy: dual circuits, sealed compartments, and backup systems.

The Hurricane, with its conical silhouette and sensors scanning the darkness, is a living fortress, a beacon of humanity hurtling toward Alpha Centauri, ready to unravel the mysteries of the stars while carrying the dreams of its occupants.

2

The Crew

The assigned mission is not inherently dangerous, if one overlooks the perils of high-speed navigation through uncharted regions where unknown phenomena may arise unexpectedly. The destination lies beyond a thick gas cloud, a dark, impenetrable wall that even the most powerful telescopes have yet to pierce.

Infrared detectors relentlessly displayed the same image to astronomers: a pale, uniform patch, devoid of any detail, like a smear of paint on the ebony velvet of the cosmos. No emissions across the electromagnetic spectrum have been recorded by the countless instruments aimed at this enigmatic cloud, the only tangible trace of which is a blurry, silent challenge to humanity.

Thus, the decision to venture there was made as soon as technological advancements allowed for the creation of spacecraft capable of meeting such a challenge. All of human science converged toward this goal, a collective effort to produce next-generation spacecraft, of which the magnificent Hurricane is a

flagship. At full power, it can reach five light-years per day, a feat that staggers the imagination. Its cruising speed is more modest, barely surpassing the light barrier—a threshold humanity has only recently crossed, still unsteady, like a child learning to walk. Decades will be needed to refine this knowledge, build solid experience in interstellar travel, and identify the countless dangers of a hostile cosmos, where every star seems to whisper an enchanting yet menacing melody.

The crew consists of five elite members, with two passengers representing the scientific corps. The Deep Space Missions Center (DSMC) selected them from over a hundred candidates, chosen for their exceptional skills and unyielding resilience. The duration of this exploratory journey remains undefined, dependent on future discoveries. This uncertainty looms like a shadow over their minds, a light but constant weight.

In the command center, a large armored glass window, thick as a wall yet transparent as crystal, offers a wide view of space. Distant stars twinkle in the absolute darkness like pinpoints of light in an ocean of ink. Their glow sometimes distorts due to the Doppler effect as the ship accelerates.

During the acceleration maneuver, all crew members are at their posts, monitoring screens where countless parameters scroll in glowing green digits: speed, energy, shield integrity, particle flux. But the most qualified among them is not human: it is NAT, an android, the latest in human artificial intelligence. Its sleek, silver hull faintly reflects the console lights, and its unyielding durability makes it the ship's cornerstone. It handles over 90% of the tasks required for flight management and spacecraft viability. Its processors hum softly in the silence, an almost soothing mechanical whisper.

NAT distributes gathered data to the multiple screens monitored by the astronauts, its communication system allowing it to speak directly in a precise, emotionless metallic voice. Sensors scattered across the hull and within the ship feed it a flood of data: external space temperature, particle pressure against the shield, the status of the distortion ion engines humming in the Hurricane's bowels. It is the undisputed supervisor, the one all eyes turn to when an alarm flashes or doubt creeps in.

Commander Omal is an exceptional man of extraordinary intelligence. Tall and imposing, with steel-gray eyes and sleek black hair falling in strands

over his forehead, he is as solid as a rock. Seated in his padded, swiveling chair, facing a dashboard studded with buttons and touchscreens, he watches NAT guide the ship toward its destination. A slight tension tightens his shoulders, but his face remains impassive, carved from absolute determination, illuminated by the cold glow of the screens.

The other members include Navigator Lomi, a lean man with agile fingers dancing over stellar charts, his eyes scanning projections of stars and trajectories; IT specialist Licky, a young woman with sharp eyes hidden behind holographic glasses, her fingers flitting across virtual keyboards; propulsion engineer Mulk, a taciturn giant whose calloused hands betray years of machine work, his gaze fixed on power gauges and temperature indicators; and armorer Louba, a woman with a piercing stare, constantly checking the ship's defenses, her hands adjusting shield parameters with meticulous precision.

All are experts in their fields, their precise movements forming a well-rehearsed choreography, a silent ballet in the infinite expanse.

Lina the brunette and Sid the blond, the scientific corps representatives, are astronomers of great erudition, mastering their discipline's full spectrum.

Their sophisticated equipment—long-range telescopes, miniaturized spectrometers, quantum sensors—hums softly in their cramped laboratory, a room cluttered with cables and screens where the scent of heated metal lingers.

Constantly occupied with telescopic observations and analyzing data from NAT's sensors, they have little time for anything else. When they retreat to their spartan cabins with gray walls, they collapse from exhaustion, their dreams haunted by mathematical curves and diffuse nebulae. Between them, there is nothing but work—a shared passion that consumes their waking hours.

Meals are served by multifunctional automatic dispensers, lined up like sentinels in a dedicated room. The space, furnished with lightweight, sturdy plastic tables and chairs with fireproof cushions, offers some comfort with padded seats near a large window. From there, the view of space is breathtaking: radiant celestial bodies dance in the void, red, blue, and

golden glints sparkling in the deep black, a spectacle that soothes the soul after hours of tension.

The crew gathers there for daily meals: steaming synthetic broth, its rich, comforting aroma filling the air; bland but nourishing protein bars; and lukewarm coffee warming their hands in metallic cups. They use these moments to talk and break the solitude of space. Their voices echo softly in the room—Licky's muffled laugh, Mulk's gruff remark, Lina's thoughtful comment—while NAT watches over the ship during these moments of respite, its sensors probing the abyss without rest.

They know their mission may be long, despite their speed. Vast is the space where every minute pulls them farther from Earth, that blue orb they carry in their memories like a talisman of good fortune, an anchor in the unknown immensity they face.

3

The Solar System.

As it passes by, the Hurricane skims Mars, its red plains and deep canyons reduced to a blurry patch by the increasing speed. The colossal Valles Marineris forms a dark, pallid scar, while in the distance, Olympus Mons, the titan of volcanoes, looms over the horizon like a slumbering colossus beneath a veil of ochre dust. Its massive caldera and gentle slopes rise over 21 kilometers above the plains.

From Mars' shadow, the moon Phobos briefly emerges, orbiting so close to the planet it seems to graze it. A gray rock riddled with deep craters, its immense Stickney crater stands out like an open wound in the dimness. Farther out, Deimos, small and discreet, floats like an elongated shadow, its smooth, pale surface barely lit by the distant Sun. It resembles a silent specter in the void.

As the Hurricane moves onward, it crosses the asteroid belt, a chaotic swirl of spinning rocks between Mars and Jupiter. Ceres, the spherical dwarf planet, glimmers faintly, while Vesta, angular and

scarred, and Pallas, darker still, pass by like forgotten sentinels.

These panoramic views, captured by quantum-resolution cameras, are part of the mission to complete the visual catalog of the solar system.

The Hurricane presses forward, soon passing Jupiter, where ochre storms swirl in majestic silence, the Great Red Spot glaring like an angry eye in the shadows.

In the centaur region, between Jupiter and Neptune, hybrid celestial objects—part asteroid, part comet—wander in the immeasurable void. The ship navigates a space populated by icy bodies with unstable, chaotic orbits, perturbed by the gas giants.

Some centaurs, like Chiron, may release gases or display a cometary tail, creating a fleeting spectacle of shimmering trails under the sunlight. Others, like Chariklo with its delicate rings, gleam subtly in the darkness. Their surfaces vary: red like Pholus or grayish and icy like Asbolus.

The ship must navigate cautiously, as these objects, though small (the largest, Chariklo, is about

302 km), follow unpredictable trajectories, risking collisions or gravitational disturbances.

Centaurs, likely ejected from the Kuiper Belt, are remnants of the solar system's past, offering clues to its formation. Recent observations show gas emissions, making the region dynamic. The ship captures unprecedented images of these transient worlds, en route to becoming comets or vanishing into space—a risky trajectory but a unique window into cosmic mysteries.

Saturn's rings glimmer in the distance like a crown of ice under the faint sunlight, their flakes dancing in a silvery glow.

A few hours later, the Hurricane reaches Pluto's orbit. The dwarf planet reveals its icy surface, marked by dark patches and pale craters. A solitary world floating at the edge of the solar system, its crust of frozen methane and nitrogen glints faintly in a desolate landscape where Charon, its faithful companion, orbits in a slow, silent waltz. Charon's grayish surface is streaked with frozen canyons, its northern pole tinged blood-red.

Beyond Pluto, the Hurricane crosses the Kuiper Belt, a chaotic ring of icy rocks and wandering debris, their irregular surfaces faintly sparkling under the dying light of the Sun. Asteroids, some as massive as mountains, perform a slow, unpredictable waltz, threatening the ship's hull. Closer in the belt, the dwarf planet Haumea, Hawaiian goddess of fertility, spins with its ellipsoidal body and moons Hiʻiaka and Namaka, whispering oceanic legends.

Farther out in the scattered disc, Eris, Greek goddess of discord, larger than Pluto, defies the darkness with its faint glow at 97 astronomical units.

The magnetic shield activates with each threat, blue flashes illuminating the hull as fragments disintegrate into sparkling dust, swallowed by the void in a shower of sparks. The crew holds its breath with every impact, the hum of magnetic fields echoing through the walls like a metallic resonance.

In the solar system's outer reaches, sednoids like Sedna and Leleākūhonua wander beyond 50 astronomical units. Their elliptical orbits, sculpted by ancient gravitational forces, graze the inner Oort Cloud, solitary sentinels of an enigmatic cosmos. Sedna, the Inuit sea goddess and mother of all marine

creatures, and Leleākūhonua, Hawaiian for “it flies until the land appears,” evoking the migratory flight of the Pacific golden plover.

Farther still, the Oort Cloud stretches as a diffuse sphere of comets and icy blocks, relics of the solar system’s origins.

Here, the danger is subtler: scattered objects, invisible to sensors until the last moment, emerge like specters in the gloom. Cometary tails, frozen in their millennial course, sometimes gleam fleetingly under weakened solar rays, but most blocks lurk in the shadows, as black as the void around them.

NAT constantly adjusts the trajectory, its precise calculations avoiding collisions, while the shield repels smaller intruders with an electric hiss, a quiet but vital symphony in the silent immensity.

The solar system and Proxima Centauri reside in the Local Interstellar Cloud, a region of low-density gas and dust, primarily hydrogen and helium. Spanning about 30 light-years, this cloud is hot but extremely tenuous, posing little resistance to the ship even at superluminal speeds. However, larger particles (dust) can present risks.

Beyond the Oort Cloud, the gulf of interstellar space opens into a near-absolute void until Proxima Centauri, 4.24 light-years from Earth. No major obstacles stand in this ocean of darkness, punctuated by rare particles and wandering dust, remnants of dead stars or primordial clouds.

Maintaining course in space, especially for interstellar travel, relies on precise navigation systems, autonomous corrections, and cosmic references, as there are no fixed landmarks like on Earth. The Hurricane uses a combination of gyroscopic inertia (fiber optic or laser gyroscopes) and inertial measurement units (IMUs) to track its orientation and trajectory. These systems measure acceleration and rotation with extreme precision, enabling course maintenance even without external signals.

Other methods, used in parallel, aid orientation. The ship relies on star charts and stellar imagers (star trackers), which identify bright stars like Sirius, Canopus, or Alpha Centauri itself. By comparing their apparent positions to a database, NAT, the onboard AI, adjusts orientation with arc-second precision.

Pulsars, neutron stars emitting regular radio pulses, serve as beacons. Their periods are so stable that the ship can triangulate its position by measuring signal arrival delays. This is crucial at such distances, as the ship, on its own, no longer receives timely correction signals from Earth due to communication delays.

Low-thrust thrusters perform micro-adjustments to counter gravitational perturbations. NAT calculates these corrections in real time, maintaining the trajectory. NAT and Lomi collaborate closely, the android plotting a real-time course using Proxima Centauri's pulses, a red dwarf whose faint, steady reddish light serves as a beacon, while the navigator adjusts angles to compensate for subtle drifts caused by gravitational currents from nearby stars like Alpha Centauri A and B, its brighter companions.

The Hurricane accelerates steadily, its course set on this star, a flickering bright point in the cosmic vastness, its dim glow barely piercing the infinite darkness.

4

The Red Dwarf.

The Centaurus constellation, one of the vastest in the southern sky, unfurls the silhouette of a half-man, half-horse hunter in the southern hemisphere, nestled between Scorpius and the Southern Cross, its stars twinkling like beacons.

While thousands of stars are visible to the naked eye or with instruments, about 35 to 40 prominent stars of notable magnitude are cataloged for routine observations.

At the heart of this splendor lies Alpha Centauri, the closest stellar system, composed of three stars: Alpha Centauri A (Rigil Kentaurus), a yellow twin of the Sun; Alpha Centauri B (Toliman), an orange K1V dwarf; and Alpha Centauri C (Proxima Centauri), a faint M5V red dwarf at 4.24 light-years, the closest star to the Sun. Proxima hosts an Earth-sized exoplanet, Proxima Centauri b, discovered in 2016, within its habitable zone.

Alpha Centauri AB, the binary formed by A and B, appears to the naked eye as a dazzling star with a

magnitude of -0.27, ranking third in brightness in the sky.

Beta Centauri, or Hadar/Agena, a triple system, captivates with its blue giant stars, Beta Centauri Aa and Ab, spectroscopic binaries so close they cannot be resolved by telescopes, their binarity detected through Doppler-induced spectral variations.

The third star, less understood but likely a main-sequence B-type star, has a magnitude of 3.95. Observations suggest a noticeable decrease in its distance from Aa-Ab.

The globular cluster Omega Centauri, a swarm of millions of stars 15,800 light-years away, fascinates with its density, its stars separated by just 0.1 light-years. The diversity in their ages and metallicity suggests multiple stellar generations. Far from a typical cluster, it may be the core of a dwarf galaxy disrupted by the Milky Way, with a flattened center orbiting a 40,000-solar-mass intermediate black hole at 7.9 km/s, inferred from increasing luminosity toward the core and frenetic stellar velocities.

The term “globular” describes their spherical or compact appearance. Gravitational forces, particularly

tidal interactions during capture, played a key role, stripping the dwarf galaxy's outskirts and leaving a dense core.

Five days later, the Hurricane cruises near Proxima Centauri, the red dwarf. Unlike the Sun, a bright and massive star, a red dwarf, with barely a tenth of the Sun's mass, is a modest ball of energy, smaller and cooler but capable of shining for trillions of years due to its slow-burning fusion.

Proxima, true to its nature, emits a dim, reddish glow, a subtle fire casting blood-red reflections on the polished hull of the spacecraft, tinting its silver metal with a shifting scarlet aura. Yet, this dwarf star is restless: its sudden, violent stellar flares send waves of charged particles that crackle against the Hurricane's magnetic shield like an electric whisper in the silence of space.

These outbursts stem from its turbulent core. Despite its small size, Proxima spins rapidly, entangling its internal magnetic fields like ropes that eventually snap, unleashing energy bursts as powerful as a million Earth volcanoes in a single blast. Small or large, these flares strike relentlessly: minor ones erupt almost daily, lasting minutes to an hour, while major

ones, capable of lighting up space like a powerful beacon, occur every 10 to 20 days, with gigantic flames roaring for half an hour before fading in a slow, two-hour decline.

Proxima is not alone in this region of the sky: it orbits as a distant satellite around the Alpha Centauri binary system, lurking even farther in the darkness, about 13,000 astronomical units away—a distance so vast it feels almost detached from its brighter siblings.

Alpha Centauri, the core of this stellar trio, is a spectacle in itself. Alpha Centauri A and B dance in a gravitational waltz, drawing closest every 80 years at just 11 times the Earth-Sun distance before drifting apart again. At this distance, their glows merge into a twinkling point, a beacon in the interstellar night visible from the Hurricane's armored window. Yet, the main system—A and B—remains mysterious: in 2205, no planets have been confirmed around these stars despite decades of searches.

The Hurricane's sensors detect an excess of infrared dust around Alpha Centauri, likely indicating a circumstellar disk or asteroid belt, perhaps the remnants of a failed planetary formation, glittering like grains of sand in the light of the two stars.

Between them, magnetic pulses ripple, subtle waves of energy dancing as their fields intertwine. These pulsations are captured by NAT's instruments like a silent echo.

Too close to ignore, the rocky planet Proxima b beckons the crew for a detour. Orbiting just 0.05 astronomical units from its red dwarf, it completes a revolution in 11 Earth days.

This planet intrigues. It lies in the temperate zone where liquid water could exist, but Proxima's relentless flares batter it. Daily, minor flares sweep its surface, and every 10 to 20 days, a cosmic monster unleashes X-rays and particles 500 times more intense than what Earth receives. During the worst outbursts, these flares can amplify up to 50,000 times, enough to strip any atmosphere in a few million years.

Commander Omal, driven by curiosity, orders a rapid approach. The Hurricane, hurtling at high speed, adjusts its trajectory in hours to skim this world.

But just as it nears, a flare erupts: Proxima blazes with blinding light for 20 minutes, a deluge of radiation making the magnetic shield hum with a low

rumble before subsiding after an hour of fading crackles.

Quantum-resolution sensors scan the surface, revealing a desolate landscape: black basalt plains cracked by millennia of radiation, smoking craters where toxic vapor geysers—perhaps sulfur dioxide—erupt in fleeting plumes, and blood-red dust dunes frozen under an empty sky. No substantial atmosphere remains, just a thin haze of gas torn away by flares, and no signs of life: no microbes in caves, no fossil traces beneath the crust. What could have been a refuge is a sterile tomb, sculpted by Proxima's fury.

— Nothing here, murmurs Lina, the scientist, her gaze fixed on the screens, her face tinged with a mix of disappointment and awe at this dead beauty. Yet, the data collected—these geysers, this ravaged surface—is a treasure for human archives, a warning against reckless colonization.

The crew's goal lies beyond, behind the mysterious gas cloud, but this brief pass by Proxima b leaves them with a sense of bitter disappointment.

This region, at the edge of known space, is a silent crossroads where starlight tells tales billions of years

old, a research ground for scholars and the bold, but for now, a lifeless desert.

After skimming Proxima b, the Hurricane departs the dead planet's vicinity, its distortion ion engines humming softly as it regains speed.

Commander Omal orders a gradual acceleration, the vibrations intensifying in the walls as the ship resumes its prodigious velocity, leaving behind the reddish glints of the red dwarf and its barren world.

5

The Cloud.

A day passes in an almost oppressive calm, punctuated by the hum of machines and the clatter of Licky's fingers on her console, her holographic glasses projecting lines of data into the air.

Then, the gas cloud looms before them, a featureless black curtain, a dark canvas stretched across the infinite. Its surface is faintly streaked with gray from traces of nitrogen mixed with the dominant hydrogen and helium.

A conventional spacecraft would have taken tens of thousands of years to cross this distance—an unthinkable eternity before the discovery of the suction system and distortion engines that shattered the light barrier.

Now, the Hurricane hurtles at a speed beyond imagination, but the cloud raises a question: should they slow down?

Omal gathers the crew before plunging into this cosmic fog of unknown depth. The light casts shifting

shadows on their tense faces through the armored window. The sky remains a tapestry of distant stars: Cassiopeia and Centaurus, warped by perspective, stand watch over indistinct nebulae, veils of mist in the infinite.

— The sensors detect no anomalies in the cloud's composition," Omal declares, his deep voice resonating in the room. "No massive bodies hidden within, no force fields or hot zones that could jeopardize our mission or the spacecraft's safety.

Sid, the astronomer, clears his throat and raises a hand, his slender fingers nervously fidgeting with a stylus.

It's a cold cloud, mostly hydrogen and helium with traces of nitrogen, he says, his blue eyes fixed on an invisible point. Its density is low, barely a few particles per cubic centimeter, and its temperature hovers near absolute zero.

The engines have nothing to fear—the magnetic shield and suction system brush these grains aside like dust on a windshield. At our current speed, we'll likely reach the cloud's edge in two or three days without needing to slow down.

A murmur of approval ripples through the crew. All prefer to maintain course, eager to reach their goal beyond this inert veil. The idea of slowing down is dismissed with unspoken agreement: why waste time in a gas desert?

NAT, motionless near the central console, offers no comment, its silence signaling consent. Its sensors, trained on the cloud, confirm the analysis: a cold, monotonous void with no apparent threat, a mere obstacle to cross.

Hours later, the ship plunges into the vast cloud. The stars vanish abruptly, swallowed by a darkness so dense it feels tangible. The flight remains steady, without the slightest turbulence. For two hours, the astronauts see only a black veil through the window, an inky sea enveloping them, smothering all light. A uniform infrared patch fills their screens, a hypnotic pale gray. NAT remains silent, its diodes blinking softly in the dimness. Everything proceeds smoothly, but a quiet tension grows in the air, an unvoiced premonition.

Suddenly, Omal feels an unusual vibration ripple through the ship, a metallic shiver that resonates in

the walls and his bones. Seconds later, NAT's voice cuts through, clear and sharp:

— The ship has struck a soft surface of unknown nature. It is slowing.

A chilling silence falls, broken only by the crew's held breaths.

Moments later, NAT continues:

— Speed is increasing. The ship has passed through the surface.

— Try to determine its nature, Omal orders, his hands gripping the armrests.

— It's a kind of electromagnetic veil surrounding this sector,

After a brief calculation, NAT adds:

— We have just exited the affected space.

— Ship status?

— All systems are operational. No damage to report.

But seconds later, NAT's voice returns, colder still, almost metallic in its detachment:

— We have lost contact with Earth.

— What? Omal exclaims, his piercing gaze slicing through the android like a blade.

— The systems are still functioning, but no signals are reaching us. The disconnection isn't from us but from Earth, or rather, from everything behind us.

Omal stands, his shadow stretching across the wall, dark and massive in the dim light.

— The breach has closed behind us, isolating us completely from our universe. It's as if we've exited a projection, a boundary—but to where?

— Let's turn back, NAT suggests, its implacable logic cutting through the air. Find that boundary and try to return to our usual space.

Omal ignores the suggestion, turning to the astronomers, his voice tinged with contained urgency.

— Lina, Sid, explain this aberrant phenomenon.

Sid clears his throat, twisting a blond lock, his nervous fingers betraying his unease.

— The data is too sparse for certainty, but if I let my imagination run… This breach could be a boundary between two realities : our universe and something else. As for its nature or origin, it's impossible to say.

Lina steps in, a faint smile playing on her lips, her dark eyes gleaming with almost tangible curiosity.

— Some scientists have hypothesized that the universe is a holographic projection, an illusion encoded on a two-dimensional surface. If that's true, exiting this projection would be unthinkable… unless we just did.

— And if we did? Omal asks, his gaze lost in the absolute black beyond the window, a void so pure it seems to devour light.

— I don’t think so, Lina replies, shaking her head slightly. We’re still in the cloud, aren’t we?

— Not anymore, Omal insists. That breach might have marked the end of the cloud—and the universe itself. We’re in the void.

— The void doesn’t exist, Sid cuts in, his voice firm despite a hint of uncertainty. Beyond the universe, there’s only absolute emptiness, a space without matter, light, or anything.

6

Absolute Emptiness!

All eyes turn to the window. The sky is black as soot, a bottomless abyss without a single glimmer to break its uniformity. The radars are silent, the infrared blind, the screens frozen in oppressive stillness.

— Speed is increasing, NAT! Lomi cries, his voice rising to a sharp pitch as he stares at his screen, numbers scrolling at an alarming rate.

Seizing the urgency, Omal reacts in a flash.

— The void is pulling us in! Turn around, now, or we'll be lost in the infinite!

NAT acts instantly. Beyond the Hurricane's maximum speed —ten light-years per day— return becomes impossible, the engines unable to resist the void's pull.

In this absolute emptiness, the ship turns with agonizing slowness, its engines roaring under the strain, a metallic scream filling the command center. NAT steers toward the cloud's trace, pushing the

power to its limit. But the ship trembles, torn between the colossal force of the void's pull and the titanic effort to break free. The walls vibrate, a low rumble shakes the hull, and the crew holds its breath, fearing the Hurricane might tear apart under the opposing forces.

For ten interminable minutes, they struggle, suspended between annihilation and salvation. Then, slowly, the speed stabilizes, enough to counter the pull. Finally, they plunge back into the cloud's familiar darkness, the absolute black of the void giving way to the cosmic fog, a brutal return to the world they had left.

Relief gives way to creeping anxiety. Faces, pale under the consoles' dim glow, regain a hint of color. Hesitant smiles ease features taut with fear, but a shadow lingers in their eyes.

They've escaped a grim fate thanks to Lomi's quick thinking, sensing the void's pull before it consumed them. His hands still tremble on his console, but he squares his shoulders, a spark of pride cutting through his exhaustion—he saved the Hurricane, and them with it

NAT reduces the ship's speed to a reasonable level, its sensors scanning the vessel's integrity with mechanical precision. The screens flicker with rapid analyses: hull intact, shield stable, engines overheated but holding. No cracks, no flaws, the ship survived its dance with the void.

The results flash on Omal's screen, and he exhales a sigh of relief. All is in order, for now.

Omal remains alone with NAT in the command center, an island of silence in the storm. The others shuffle to their cabins, their silhouettes hunched by a fatigue beyond the physical. The machines' faint hum fills the air, a familiar murmur now tinged with subtle menace.

— Have we reached the boundary surface? Omal asks, his eyes fixed on the window where the cloud swirls, thick as a soup of darkness.

— Not yet, NAT replies, its monotone voice slicing the silence. We've been searching for it. No trace so far.

Two hours drag by, heavy and slow, before the android adds:

— We're nearing the cloud's edge.

— The breach might only exist on one side, Omal murmurs, his brow furrowed, a crease etching his forehead. Impossible to find it in reverse. We're in deep trouble, NAT. Any news on communications?

— Still silent, like the void itself.

— What does this mean? Do you have an explanation?

— None for now, NAT replies. But this silence is troubling.

— Absolutely, NAT, Omal growls. As soon as we exit the cloud, set course for Earth. We can't go on like this. We need to return to civilization.

— Wise decision, the android agrees. The crew's heart isn't in these adventures anymore.

Half an hour later, the Hurricane bursts from the cloud like a silver bolt, its hull glinting under a harsh, unfamiliar light. NAT takes stock, its diodes blinking

frantically as it compiles data. An unusual silence stretches, too long for the typically swift android.

— Well, NAT? Omal presses, impatience roughening his voice.

— I don't know, NAT responds, its words falling like stones. "We've emerged elsewhere. This sector matches no known charts. The density of spiral galaxies—pale swirls stretching endlessly—suggests we're in the intergalactic void, far from any nearby star.

Omal runs a hand over his face, his fingers rasping against stubble, his gray eyes dulled by sudden fatigue.

— We're not out of the woods. After nearly banishing us from the cosmos, this cloud tosses us out at random, like it's playing with us. If problems keep piling up, the return will be an odyssey… if there's a return at all.

NAT's words echo in his mind, chillingly resonant.

— My God, the intergalactic void? Finding the Milky Way, Earth—it's impossible! The Hurricane

wasn't built for this. We've barely mastered interstellar travel—ten thousand years, at least, to get back, if we even can…

— Ten thousand years? NAT repeats, impassive. "No human ship could last that long. Staying here would be wiser, or less reckless.

— Go back into the cloud for a few minutes, then come out, Omal orders, his voice weary but resolute. "Repeat as many times as it takes. It has to bring us home eventually.

But after a series of dives and emergences, the truth hits, unrelenting. Each exit thrusts them into a different sector—fields of spiral galaxies spinning like pale windmills, voids speckled with dying stars, unknown nebulae in unreal hues. The cloud refuses to cooperate.

— It's like a kaleidoscope, Omal murmurs, his voice low, almost extinguished. A prism refracting space, sending us through infinite doors. Only one leads home, but if there are infinitely many… we're lost for good.

— Not necessarily, NAT counters, its metallic voice cutting through the despair. In this vastness, a habitable planet might exist. You could settle there, wait to understand. Finding Earth remains possible, but it will take time. Perhaps we're still in our universe, just shifted to another era.

— If time's involved, it's hopeless, Omal growls, his fists clenched. "Wander indefinitely or settle somewhere… But wait, we're five with two women, only.

— No issue for now, NAT replies, neutral as ever.

— Not yet, Omal mutters. This cloud could be a spatio-temporal projector. But where's it drawing its energy from?

— An enigma, NAT says. My analyses show a mundane cloud—hydrogen, helium, nitrogen—nothing extraordinary. Something external must power it, beyond my reach.

Omal stares at the swirling gray cloud, visible in the distance like a shifting shadow, his mind grasping for answers in the chaos.

— How can an ordinary cloud do this? Any ideas?

— Not really, NAT responds. Some theorize the universe is a projected image, a hologram, a three-dimensional illusion created by a flat surface far in the cosmos. Everything we see—stars, ourselves—would just be encoded light. This cloud might be part of that hypothetical projection, as the surface we crossed and the absolute void beyond it suggest.

Omal nods, grasping the concept.

7

Providence?

Omal sighs, running a hand over his damp forehead.

— Lost is lost, let's take a shot in the dark. Calculate the exact time we spent in the cloud before hitting the breach. Go back in, matching that timing to exit right at the end. I don't know… It's all we've got.

NAT complies with inhuman precision, calculating to the billionth of a second. It factors in the initial velocity, the exact trajectory, and every possible variation into the autopilot.

The Hurricane dives back into the cloud, its engines humming under the strain of a reckless gamble.

Chance? Luck? Providence?

Suddenly, they burst into space, and a reddish glow floods the window, familiar yet unsettling. Proxima Centauri, the red dwarf, shines ahead, its blood-red reflections dancing on the hull.

Omal leaps from his seat, a hoarse cry erupting from his throat:

— We did it! A miracle! Get us away from this cursed cloud, NAT! Wake the crew, set course for Earth! I'm heading to my cabin—I'm spent. Let Lomi take over, but wake me at the slightest issue.

NAT tilts its metallic head, its diodes blinking softly, and the Hurricane veers away from the cloud, leaving behind a nightmare they may have just escaped.

Omal collapses onto his bunk, overcome by exhaustion. Sleep engulfs him instantly, pulling him into a dreamless black abyss, his fists clenched against his chest as if to cushion his fall. He drifts for long hours, the distant hum of the engines cradling his fragile rest.

The return journey unravels in a monotonous thread, almost too peaceful after the cloud's chaos. From Proxima Centauri's reddish glow, the Hurricane charts its course through familiar emptiness. The Oort Cloud looms, a graveyard of icy debris floating like specters in the dark, their prismatic glints faintly sparkling under the sensors. Then the Kuiper Belt, its

dark rocks drifting with solemn slowness, remnants of a once-vibrant solar system. Pluto appears in the distance, a frozen orb glinting timidly, followed by Jupiter, its ochre and red bands swirling in silent majesty, its moons dancing like shadows on its flank. Everything seems in place, perhaps too perfect.

But NAT shatters the illusion.

— I'm receiving no emissions across the electromagnetic spectrum," it announces, its diodes blinking faster, a nervous rhythm for a machine. "Earth is silent."

Omal jolts awake, roused by Lomi's call. He leaps from his cabin, hair disheveled, cold sweat beading on his brow.

— That's troubling, he growls, rubbing his heavy eyes. A total blackout is unlikely. I'm afraid I understand this silence.

The crew—Lomi, Sid, Lina, Mulk—gathers in the command center, their faces lit by the screens' pale glow. An unspoken truth hangs between them: the cloud has marked them, haunting them to the heart of the solar system. By crossing that breach, they've left

their original universe's projection, forever out of reach, for a sterile elsewhere.

— Let's wait until we're there, Omal says, his voice steady despite the fatigue etching his features. "The ship could be affected—maybe the cloud's molecules disrupted our systems. At this point, anything's possible.

Hours later, the Hurricane reaches Earth's vicinity. NAT slows the engines, a mechanical sigh echoing through the hull, and places the ship in low orbit.

All eyes turn to the window, eager yet fearful. The planet reveals itself, and a collective shiver runs through them. Earth is no longer blue. A gray, dull sphere floats in the void, stripped of its oceans, its greenery gone. Bare continents, scarred with jagged mountains, stretch under an empty sky, draped in a shroud of eternal silence.

A chorus of despair erupts, voices breaking in the confined air:

— No, this isn't Earth!

— Unfortunately, NAT corrects, impassive, it is Earth, but the one existing outside the projection. It never harbored life.

Omal spins toward NAT, brows furrowed, his breath held : Explain!

— The universe you knew—blue Earth, its oceans, forests, radio signals—was a projection, a reality where life flourished," NAT replies, its monotone voice cutting through the air. "By crossing the breach, we left that framework, which remains inaccessible. What you see is raw Earth, outside that projection: a ball of rock and dust, formed billions of years ago, where the spark of life never ignited. No liquid water, no viable atmosphere, just a dead world, as it is without the projection that made it alive.

Sid interjects, his voice trembling:

— You mean life only exists in there, in the universe we lost?

— Exactly, NAT confirms. "Outside, there's nothing, not here or anywhere in this system. It's an absolute desert.

Omal scans the crew, his gray eyes hardened by bitter clarity.

— We were incredibly lucky to return to a geographically familiar space. But this Earth… it's not ours. The ship is intact, its fusion reactor nearly inexhaustible. We have water, supplies, hydroponic greenhouses—the danger isn't immediate. Yet, the projection where life existed is out of reach. We must find a habitable planet—a second Earth—and settle there, because here, there's nothing left to hope for.

— I have a list of exoplanets," NAT announces. Over 5,000 cataloged in the Milky Way by 2205. But outside the projection, that data may be useless.

— Jump to Venus, Sid suggests, a desperate glint in his blue eyes. We could check.

— Pointless, NAT retorts. No signals emanate from the solar system: no radio, no infrared, nothing. If life never existed here, it won't elsewhere in this void.

The detour confirms their fears. Venus, a white-hot globe, exhales sulfurous vapors, a sterile furnace beneath its toxic veil. Mars, red and dusty,

stretches in cracked plains, its polar caps reduced to frost patches, a desert without breath or traces of ancient rivers. The solar system is an empty shell, a planetary mausoleum where life never took root, a mute echo of a cosmos that never awoke.

8

The Guardians of the Infinite!

For five long years, the Hurricane scours the Milky Way in search of Earth 2, a final hope in the vast darkness. Stars pass under their weary gazes: pulsing red giants like dying hearts, white dwarfs frozen in stellar ash, iridescent nebulae unfurling shimmering veils, growling black holes warping space in silence. But every visited system whispers the same cruel truth: the galaxy is a desert, a graveyard of cold, silent stars, as dead as the solar system left behind. Earth 2 doesn't exist, not here, outside the projection they've lost.

Chance won't save them. Their salvation comes from a force more unfathomable than the gas cloud that exiled them. They'll never see the Earth they knew, for by crossing that fateful breach, they left their world's projection, a living oasis now out of reach. The cloud, mundane on the surface with its hydrogen and helium, is merely a lever, a natural veil animated by incomprehensible powers, opening to a sterile void where nothing is born or lives. The projection, their native universe, is a sealed enclave, inaccessible from outside, a living refuge in an arid

cosmos, shaped by the rules of a cosmic game designed by beings beyond understanding.

These beings are the Guardians of the Infinite. Their existence spans millennia, a vast but not endless longevity. Eons pass, indifferent to their gaze, time no longer holding sway over them. Yet, boredom grips them, a weight as ancient as their centuries. To escape it, they created a game: to incarnate among humans, to be born on Earth, grow, age, and die alongside them, then return to their essence, enriched by these fleeting lives.

Earth is their domain, a vibrant bubble shared with humanity, a tenuous balance between their desires and the tumult of life they only half-control.

Five years of wandering have worn their human forms, their hopes ground to dust as cold as the stars they behold. But suddenly, a wave shakes the command center. NAT, its sensors overwhelmed by a sudden flood of data, pivots toward the crew, its diodes flickering in a frenzied dance.

A voice booms, powerful and sarcastic, erupting from the void:

— You've stepped out of the game. We're coming to retrieve you, but first, receive this, wayward pawns!

Simultaneously, NAT projects a decrypted stream onto the screens: images of a planet of inconceivable beauty—azure liquid oceans sparkling under twin golden suns, crystal forests with rainbow reflections singing in the wind, floating mountains draped in silver mist. Slender humanoids move there, their iridescent skin catching light like living prisms, their deep eyes gleaming with infinite wisdom.

Then, a phrase rings out, clear and sharp like a code:

— By the light of the Infinite, remember!

A torrent of memories floods their minds. The veil of amnesia tears apart, brutal and radiant. Omal staggers, hands trembling as flashes of a prior life—eons spent weaving the projection—overwhelm him.

Lina closes her eyes, breathless from visions of her birth on Earth, a deliberate choice to play this game.

Sid presses a hand to his forehead, flooded by echoes of forgotten millennia, his disbelief turning into nervous laughter.

Mulk clenches his fists, muscles taut with shock, resisting at first before yielding to the truth.

Lomi, motionless, stares at the screen, tears betraying a mix of joy and vertigo.

All, except NAT, the android witness, are Guardians of the Infinite, born on Earth to escape

their long lives, their human memories masking their essence until this moment of truth.

Disbelief grips them at first: how could they forget who they were? But the images of that planet, their true home, and the key phrase shatter their doubts.

They finally understand they're not lost but saved. The Guardians of the Infinite, their peers, are coming to retrieve them, to bring them home to that world of surreal beauty, far from the projection they shaped.

The Hurricane shudders, enveloped in a soft glow, and their gazes meet, carrying a newfound peace.

The end.

This story of “Cosmic Game” is not just a gripping sci-fi narrative but also a rich astronomical journey that vividly showcases the wonders of our solar system and beyond, all the way to Proxima Centauri.

It shows a detailed tapestry of celestial bodies making it an engaging and educational read for those unfamiliar with these cosmic features.

For readers new to astronomy, this book serves as an accessible guide, bringing to life the stark beauty of Mars’ Valles Marineris, the chaotic orbits of centaurs, the icy desolation of the Kuiper Belt, and the mysterious veil of the Oort Cloud, all while exploring the stellar dynamics of Proxima Centauri and its siblings.